IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Rai, Vikram

Serial Number: 10/717,065

Filed: 11/19/2003

Group Art Unit: 2617

Examiner: Cho, Un C.

Confirmation No.:   7231

Title: METHOD AND APPARATUS FOR SCHEDULING
                         FORWARD DATA BURSTS IN WIRELESS NETWORK

REPLY BRIEF

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in reply to the Examiner's Answer mailed on March 16, 2010.

The rejections under 35 U.S.C. §103 must be reversed. It is not possible for the Examiner

to establish a *prima facie* case of obviousness based upon a generalized characterization of the

Sindhushayana, et al. reference that is not as specific as the terms in Appellant's claims.

Moreover, the Examiner's proposed interpretation of the *Sindhushayana, et al.* reference is

inconsistent with the actual teachings of the reference, itself.

In an attempt to prop up the missing *prima facie* case of obviousness in this case, the

Examiner points to paragraphs 0044-0045 and 0047-0049 of the *Sindhushayana, et al.* reference

alleging that they somehow teach "at least one burst segment of each data burst [is] scheduled for

transmission on the widest virtual pipe." The Examiner relies upon the phrase "optimal forward

link throughput level" in paragraph 0045 of the *Sindhushayana, et al.* reference. The Examiner

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also contends that paragraphs 0047-0049 disclose a maximum data transmission rate that can be sustained for transmission.

Half of the problem with the Examiner's position is that a mere disclosure of an optimal forward link throughput level does not teach having at least one burst segment of each data burst scheduled on a widest virtual pipe. Achieving a maximum data transmission rate does not require that, either. The Examiner's generalized statements about what the *Sindhushayana, et al.* reference teaches are not enough to establish a *prima facie* case of obviousness because they do not meet the limitations of Appellant's claims.

Moreover, the Examiner's interpretation is inconsistent with the actual teachings of the reference. As pointed out by Appellant in its opening brief, the actual teachings of paragraphs 0047-0049 indicate that mobile stations will request low data rate packets. Low data rate packets are not transmitted at the highest data rate. Therefore, there is not always at least one packet scheduled at the highest data rate according to the *Sindhushayana, et al.* reference. The Examiner contends that the data rates in that reference are virtual pipes. Given that the reference teaches scheduling low data rate packet transmissions as the only transmission to some mobile stations, it eliminates the inclusion of a high data rate packet for at least some circumstances. It is therefore impossible to find at least one packet of every data burst being scheduled on a widest virtual pipe or even at a highest data rate.[1]

The technique described in paragraphs 0047-0049 of the *Sindhushayana, et al.* reference depends upon an ARQ procedure that includes mobile stations transmitting messages indicating

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[1] As noted in Appellant's opening brief, Appellant does not concede that the Examiner's interpretation of data rates being the same as virtual pipes is correct. There are a variety of ways of characterizing data rates and it does not necessarily follow that the different data rates of the *Sindhushayana, et al.* reference constitute establishing different size virtual pipe. There certainly is nothing in the reference that constitutes establishing permanent virtual pipes.

whether the mobile station has received a previously transmitted packet. In paragraph 0047, it is clear that remote stations will request low data rate packets and that the base station transmits them as requested. The way in which the *Sindhushayana, et al.* reference increases the effective data transmission rate is to cause the base station to stop transmitting remaining sub-packets if the remote station determines that the data packet can be decoded from only a portion of the sub-packets scheduled for transmission. This is explained in paragraph 0048. This fast ARQ procedure that allows a base station to stop transmitting packets is the technique by which the *Sindhushayana, et al.* reference provides the "potential to significantly increase the forward link throughput." This is described at the beginning of paragraph 0049 and at the end of that same paragraph. "Hence, it is important for the remote station to inform the base station as soon as the remote station has enough information to decode a data packet, so that early termination of transmissions can occur, which enhances the data transmission rate of the data packet."

Alerting a base station that it can stop transmission in order to increase data throughput is not the same thing as always including at least one packet of a scheduled data burst on a widest pipe of a plurality of virtual pipes. There is nothing in the *Sindhushayana, et al.* reference that the Examiner can point to that actually corresponds to the technique of Appellant's claims. There is no possible *prima facie* case of obviousness.

The rejections under 35 U.S.C. §103 must be reversed.

Dated: May 17, 2010   Respectfully submitted,

CARLSON, GASKEY & OLDS
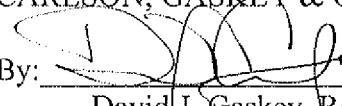
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